

SEQUENCE LISTING

<110> MISHRA, LOPA
 <120> GENES CODING FOR EARLY LIVER DEVELOPMENT...
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Leu Ser Lys His Arg Ala Phe Glu Asp Glu Met Ser Gly Arg Ser Gly			
665	670	675	
cat ttt gag cag gcc att aaa gaa ggt gaa gac atg att gca gag gaa			2417
His Phe Glu Gln Ala Ile Lys Glu Gly Glu Asp Met Ile Ala Glu Glu			
680	685	690	695
cac ttt gga tcg gaa aag atc cgt gag aga atc att tat atc cgg gag			2465
His Phe Gly Ser Glu Lys Ile Arg Glu Arg Ile Ile Tyr Ile Arg Glu			
700	705	710	
cag tgg gcc aac ctg gaa cag ctc tca gcc att agg aag aag cgc cta			2513
Gln Trp Ala Asn Leu Glu Gln Leu Ser Ala Ile Arg Lys Lys Arg Leu			
715	720	725	
gag gaa gcc tca tta ctg cac cag ttc cag gct gat gct gat gat att			2561
Glu Glu Ala Ser Leu Leu His Gln Phe Gln Ala Asp Ala Asp Asp Ile			
730	735	740	
gat gct tgg atg tta gat ata ctc aag att gtc tcc agc aat gat gtg			2609
Asp Ala Trp Met Leu Asp Ile Leu Lys Ile Val Ser Ser Asn Asp Val			
745	750	755	
ggc cat gat gag tac tcc acg cag tct ctg gtc aag aag cat aaa gat			2657
Gly His Asp Glu Tyr Ser Thr Gln Ser Leu Val Lys Lys His Lys Asp			
760	765	770	775
gta gca gaa gag atc acc aac tgc agg ccc act att gac aca ctg cat			2705
Val Ala Glu Glu Ile Thr Asn Cys Arg Pro Thr Ile Asp Thr Leu His			
780	785	790	
gag caa gcc agt gcc ctt cca caa gca cat gca gag tct cca gat gtg			2753
Glu Gln Ala Ser Ala Leu Pro Gln Ala His Ala Glu Ser Pro Asp Val			
795	800	805	
aag ggc cgg ctg gca gga att gag gag cgc tgc aag gag atg gca gag			2801
Lys Gly Arg Leu Ala Gly Ile Glu Glu Arg Cys Lys Glu Met Ala Glu			
810	815	820	
tta aca cgg cta agg aag cag gct ctg cag gac acc ctg gcc ctg tac			2849
Leu Thr Arg Leu Arg Lys Gln Ala Leu Gln Asp Thr Leu Ala Leu Tyr			
825	830	835	
aag atg ttc agt gag gct gat gcc tgt gag ctc tgg att gac gag aag			2897
Lys Met Phe Ser Glu Ala Asp Ala Cys Glu Leu Trp Ile Asp Glu Lys			
840	845	850	855
gag cag tgg ctc aac aac atg cag atc cca gag aag ctg gag gac ctg			2945
Glu Gln Trp Leu Asn Asn Met Gln Ile Pro Glu Lys Leu Glu Asp Leu			
860	865	870	
gaa gtc atc cag cac aga ttt gag agc cta gaa cca gaa atg aac aac			2993
Glu Val Ile Gln His Arg Phe Glu Ser Leu Glu Pro Glu Met Asn Asn			
875	880	885	
cag gct tcc cgg gtt gct gtg aac cag att gca cgg cag ctg atg			3041
Gln Ala Ser Arg Val Ala Val Val Asn Gln Ile Ala Arg Gln Leu Met			
890	895	900	
cac aat ggc cac ccc agt gaa aag gaa atc aga gct cag caa gac aaa			3089
His Asn Gly His Pro Ser Glu Lys Glu Ile Arg Ala Gln Gln Asp Lys			
905	910	915	
ctc aac acg agg tgg agt cag ttc aga gaa ctg gtg gac agg aaa aag			3137
Leu Asn Thr Arg Trp Ser Gln Phe Arg Glu Leu Val Asp Arg Lys Lys			
920	925	930	935
gat gct ctt ctg tct gcc ctg agc atc cag aac tac cac ctc gag tgc			3185
Asp Ala Leu Leu Ser Ala Leu Ser Ile Gln Asn Tyr His Leu Glu Cys			
940	945	950	
aat gaa acc aaa tcc tgc atc cgg gag aag acc aag gtc atc gag tct			3233
Asn Glu Thr Lys Ser Cys Ile Arg Glu Lys Thr Lys Val Ile Glu Ser			
955	960	965	
acc caa gac ctt ggc aat gac ctg gca ggt gtc atg gcc ctg cag tgc			3281
Thr Gln Asp Leu Gly Asn Asp Leu Ala Gly Val Met Ala Leu Gln Cys			
970	975	980	
aag ctg act ggc atg gaa cga gac ttg gta gcc att gag gcg aag ctg			3329

Lys	Leu	Thr	Gly	Met	Glu	Arg	Asp	Leu	Val	Ala	Ile	Glu	Ala	Lys	Leu	
985				990							995					
agt	gac	ctg	cag	aaa	gaa	gct	gag	aag	ctg	gag	tcc	gag	cac	cct	gac	3377
Ser	Asp	Leu	Gln	Lys	Glu	Ala	Glu	Lys	Leu	Glu	Ser	Glu	His	Pro	Asp	
1000				1005					1010				1015			
cag	gct	caa	gct	atc	ctg	tct	cg	gtt	gcc	gag	atc	agt	gat	gtg	tgg	3425
Gln	Ala	Gln	Ala	Ile	Leu	Ser	Arg	Leu	Ala	Glu	Ile	Ser	Asp	Val	Trp	
				1020					1025				1030			
gag	gaa	atg	aag	aca	acc	ctg	aag	aac	cga	gag	gcc	tcc	ctg	gga	gag	3473
Glu	Glu	Met	Lys	Thr	Leu	Lys	Arg	Glu	Ala	Ser	Leu	Gly	Glu			
				1035				1040				1045				
gcc	agc	aag	ctg	cag	cag	ttt	ctg	cg	gac	ttg	gac	ttc	cag	tct	3521	
Ala	Ser	Lys	Leu	Gln	Gln	Phe	Leu	Arg	Asp	Leu	Asp	Asp	Phe	Gln	Ser	
				1050			1055				1060					
tgg	ctc	tcc	agg	acc	cag	act	gct	atc	gcc	tca	gag	gac	atg	ccc	aat	3569
Trp	Leu	Ser	Arg	Thr	Gln	Thr	Ala	Ile	Ala	Ser	Glu	Asp	Met	Pro	Asn	
				1065			1070				1075					
acc	ctc	act	gag	gca	gag	aag	ctt	ctc	aca	cag	cac	gag	aat	atc	aaa	3617
Thr	Leu	Thr	Glu	Ala	Glu	Lys	Leu	Leu	Thr	Gln	His	Glu	Asn	Ile	Lys	
				1080			1085				1090				1095	
aat	gag	atc	gac	aat	tat	gag	gaa	gac	tac	cag	aag	atg	cgg	gac	atg	3665
Asn	Glu	Ile	Asp	Asn	Tyr	Glu	Glu	Asp	Tyr	Gln	Lys	Met	Arg	Asp	Met	
				1100			1105				1110					
ggc	gag	atg	gtc	acc	cag	ggg	cag	act	gcc	cag	tat	atg	ttt	ctg	3713	
Gly	Glu	Met	Val	Thr	Gln	Gly	Gln	Thr	Asp	Ala	Gln	Tyr	Met	Phe	Leu	
				1115			1120				1125					
cg	cag	cg	ctg	cag	gcc	tta	gac	act	ggc	tgg	aat	gag	ctc	cac	aaa	3761
Arg	Gln	Arg	Leu	Gln	Ala	Leu	Asp	Thr	Gly	Trp	Asn	Glu	Leu	His	Lys	
				1130			1135				1140					
atg	tgg	gag	aac	agg	caa	aac	ctc	ctc	tcc	cag	tcc	cat	gcc	tac	cag	3809
Met	Trp	Glu	Asn	Arg	Gln	Asn	Leu	Leu	Ser	Gln	Ser	His	Ala	Tyr	Gln	
				1145			1150				1155					
cag	tcc	ttt	agg	gac	acc	aaa	caa	gct	gaa	gct	ttt	ctt	aat	aac	cag	3857
Gln	Phe	Leu	Arg	Asp	Thr	Lys	Gln	Ala	Glu	Ala	Phe	Leu	Asn	Asn	Gln	
				1160			1165				1170				1175	
gag	tat	gtt	ttg	gt	cat	act	gaa	atg	ccc	acc	acc	ctg	gaa	gga	gct	3905
Glu	Tyr	Val	Leu	Ala	His	Thr	Glu	Met	Pro	Thr	Thr	Leu	Glu	Gly	Ala	
				1180			1185				1190					
gaa	gca	gcc	att	aaa	aag	cag	gag	gac	ttc	atg	acc	acc	atg	gat	gcc	3953
Glu	Ala	Ala	Ile	Lys	Lys	Gln	Glu	Asp	Phe	Met	Thr	Thr	Met	Asp	Ala	
				1195			1200				1205					
aac	gag	gag	aag	atc	aat	gct	gtt	gtg	gag	act	ggc	cga	aga	ctg	gtg	4001
Asn	Glu	Glu	Ile	Asn	Ala	Val	Val	Glu	Thr	Gly	Arg	Arg	Leu	Val		
				1210			1215				1220					
agc	gat	ggg	aac	atc	aac	tcc	gac	cg	atc	cag	gag	aag	gtg	gac	tct	4049
Ser	Asp	Gly	Asn	Ile	Asn	Ser	Asp	Arg	Ile	Gln	Glu	Lys	Val	Asp	Ser	
				1225			1230				1235					
att	gac	gac	aga	cac	agg	aat	cga	gaa	gca	gcc	agt	gaa	ctt	ctg	4097	
Ile	Asp	Asp	Arg	His	Arg	Lys	Asn	Arg	Glu	Ala	Ala	Ser	Glu	Leu	Leu	
				1240			1245				1250				1255	
atg	agg	tta	aag	gac	aac	cgt	gat	cta	cag	aag	tcc	ctg	caa	gat	tgt	4145
Met	Arg	Leu	Lys	Asp	Asn	Arg	Asp	Leu	Gln	Lys	Phe	Leu	Gln	Asp	Cys	
				1260			1265				1270					
caa	gag	ctg	tcc	tc	tgg	atc	aat	gaa	aag	atg	ctt	aca	gct	caa	gac	4193
Gln	Glu	Leu	Ser	Leu	Trp	Ile	Asn	Glu	Lys	Met	Leu	Thr	Ala	Gln	Asp	
				1275			1280				1285					
atg	tct	tat	gat	gaa	gcc	aga	aat	ctg	cac	agt	aaa	tgg	tta	aag	cat	4241
Met	Ser	Tyr	Asp	Glu	Ala	Arg	Asn	Leu	His	Ser	Lys	Trp	Leu	Lys	His	
				1290			1295				1300					
caa	gca	ttt	atg	g	cg	gaa	ctt	gca	tcc	aac	aaa	gaa	tgg	ctt	gac	4289
Gln	Ala	Phe	Met	Ala	Glu	Leu	Ala	Ser	Asn	Lys	Glu	Trp	Leu	Asp	Lys	
				1305			1310				1315					
att	gag	aag	gaa	gga	atg	cag	ctt	att	tca	gaa	aag	cca	gaa	aca	gaa	4337
Ile	Glu	Lys	Glu	Gly	Met	Gln	Leu	Ile	Ser	Glu	Lys	Pro	Glu	Thr	Glu	
				1320			1325				1330				1335	

gct gtg gta aag gaa aaa ctc act ggt tta cat aaa atg tgg gaa gtc Ala Val Val Lys Glu Lys Leu Thr Gly Leu His Lys Met Trp Glu Val 1340 1345 1350	4385
ctt gaa tcc aca acc cag acc aag gcc cag cgg ctc ttt gat gca aat Leu Glu Ser Thr Thr Gln Thr Lys Ala Gln Arg Leu Phe Asp Ala Asn 1355 1360 1365	4433
aag gct gag ctt ttc aca caa agc tgc gca gat ctt gac aaa tgg cta Lys Ala Glu Leu Phe Thr Gln Ser Cys Ala Asp Leu Asp Lys Trp Leu 1370 1375 1380	4481
cat ggc ctg gag agc cag att caa tct gac .gac tat ggc aaa gac ctt His Gly Leu Ser Gln Ile Gln Ser Asp Asp Tyr Gly Lys Asp Leu 1385 1390 1395	4529
acc agt gtc aat att ctt ctg aaa aag caa cag atg ctg gag aat cag Thr Ser Val Asn Ile Leu Leu Lys Gln Gln Met Leu Glu Asn Gln 1400 1405 1410 1415	4577
atg gaa gtt cg ^g aag aaa gag atc gag gaa ctg cag agc caa gcc cag Met Glu Val Arg Lys Lys Glu Ile Glu Glu Leu Gln Ser Gln Ala Gln 1420 1425 1430	4625
g ^c g ctg agt cag gag ggg aag agc aca gat gag gtg gac agc aaa cgc Ala Leu Ser Gln Glu Gly Lys Ser Thr Asp Glu Val Asp Ser Lys Arg 1435 1440 1445	4673
ctt act gtg cag acc aag ttc atg gag ctt ctg gag ccc ttg agt gag Leu Thr Val Gln Thr Lys Phe Met Glu Leu Leu Glu Pro Leu Ser Glu 1450 1455 1460	4721
agg aag cat aac ctg tta gct tcc aag gag atc cat cag ttc aac agg Arg Lys His Asn Leu Leu Ala Ser Lys Glu Ile His Gln Phe Asn Arg 1465 1470 1475	4769
gat gtg gag gac gaa atc cta tgg gtt ggc gag agg atg cct ttg gca Asp Val Glu Asp Glu Ile Leu Trp Val Gly Arg Met Pro Leu Ala 1480 1485 1490 1495	4817
act tcc aca gat cat ggc cat aac ctt caa act gtg cag ctg tta ata Thr Ser Thr Asp His Gly His Asn Leu Gln Thr Val Gln Leu Leu Ile 1500 1505 1510	4865
aag aaa aac cag acc ctc cag aaa gaa atc cag gga cac cag cct cgt Lys Lys Asn Gln Thr Leu Gln Lys Glu Ile Gln Gly His Gln Pro Arg 1515 1520 1525	4913
att gat gac atc ttt gag agg agt caa aac atc atc aca gat agc agc Ile Asp Asp Ile Phe Glu Arg Ser Gln Asn Ile Ile Thr Asp Ser Ser 1530 1535 1540	4961
agc ctc aat gcc gag gct atc agg cag agg ctc gct gac ctg aag cag Ser Leu Asn Ala Glu Ala Ile Arg Gln Arg Leu Ala Asp Leu Lys Gln 1545 1550 1555	5009
ctg tgg ggg ctc ctc att gag gaa act gag aaa cgc cat aga cgg ctg Leu Trp Gly Leu Leu Ile Glu Glu Thr Glu Lys Arg His Arg Arg Leu 1560 1565 1570 1575	5057
gag gag gca cac aag gcg cag cag tac tac ttt gat gca gct gaa gcc Glu Glu Ala His Lys Ala Gln Gln Tyr Phe Asp Ala Ala Glu Ala 1580 1585 1590	5105
gag gca tgg atg agt gaa cag gag ttg tac atg atg tct gag gaa aag Glu Ala Trp Met Ser Glu Gln Glu Leu Tyr Met Met Ser Glu Glu Lys 1595 1600 1605	5153
gcc aag gat gag cag agt gct gtc tct atg ttg aaa aag cac cag att Ala Lys Asp Glu Gln Ser Ala Val Ser Met Leu Lys Lys His Gln Ile 1610 1615 1620	5201
tta gag caa gct gtt gag gac tat gca gag aca gta cac cag ctc tcc Leu Glu Gln Ala Val Glu Asp Tyr Ala Glu Thr Val His Gln Leu Ser 1625 1630 1635	5249
aag act agc cgg gcg ctg gtg gct gac agc cat ccc gaa agt gag cgt Lys Thr Ser Arg Ala Leu Val Ala Asp Ser His Pro Glu Ser Glu Arg 1640 1645 1650 1655	5297
att agc atg cgg cag tca aag gtc gac aag ctg tat gct ggc ctg aag Ile Ser Met Arg Gln Ser Lys Val Asp Lys Leu Tyr Ala Gly Leu Lys 1660 1665 1670	5345
gac ctt gct gag gag agg aga aaa ctt gat gag agg cac agg ctg	5393

Asp Leu Ala Glu Glu Arg Arg Gly Lys Leu Asp Glu Arg His Arg Leu			
1675	1680	1685	
ttc cag ctc aac aga gag gtg gat gac ctg gaa cag tgg atc gct gag	Phe Gln Leu Asn Arg Glu Val Asp Asp Leu Glu Gln Trp Ile Ala Glu	5441	
1690	1695	1700	
agg gaa gtg gtc gca ggc tcc cat gag ttg gga cag gag tat gag cat	Arg Glu Val Val Ala Gly Ser His Glu Leu Gly Gln Asp Tyr Glu His	5489	
1705	1710	1715	
gtc acg atg tta caa gaa cgg ttc cga gaa ttt gct cga gac aca gga	Val Thr Met Leu Gln Glu Arg Phe Arg Glu Phe Ala Arg Asp Thr Gly	5537	
1720	1725	1730	1735
aac att ggg cag gag cgt gtg gat aca gtt aat aac atg gca gat gaa	Asn Ile Gly Gln Glu Arg Val Asp Thr Val Asn Asn Met Ala Asp Glu	5585	
1740	1745	1750	
ctc atc aac tct gga cat tca gat gct gcc acc att gct gag tgg aaa	Leu Ile Asn Ser Gly His Ser Asp Ala Ala Thr Ile Ala Glu Trp Lys	5633	
1755	1760	1765	
gat ggt ctc aat gaa gcc tgg gct gac ctc ctg gag ctc att gac aca	Asp Gly Leu Asn Glu Ala Trp Ala Asp Leu Leu Glu Leu Ile Asp Thr	5681	
1770	1775	1780	
aga aca cag att ctt gct gcc tca tat gaa ctt cat aag ttt tac cat	Arg Thr Gln Ile Leu Ala Ala Ser Tyr Glu Leu His Lys Phe Tyr His	5729	
1785	1790	1795	
gat gcc aag gag atc ttt ggc cga atc cag gac aaa cac aag aaa ctc	Asp Ala Lys Glu Ile Phe Gly Arg Ile Gln Asp Lys His Lys Lys Leu	5777	
1800	1805	1810	1815
cct gag gag ctt gga aga gat caa aac act gtg gaa act tta cag aga	Pro Glu Glu Leu Gly Arg Asp Gln Asn Thr Val Glu Thr Leu Gln Arg	5825	
1820	1825	1830	
atg cac acc acc ttt gag cac gac atc caa gct ctg ggc act cag gtg	Met His Thr Thr Phe Glu His Asp Ile Gln Ala Leu Gly Thr Gln Val	5873	
1835	1840	1845	
agg cag ctg cag gag gat gca gct cgc ctc cag gca gcc tat gca ggg	Arg Gln Leu Gln Glu Asp Ala Ala Arg Leu Gln Ala Ala Tyr Ala Gly	5921	
1850	1855	1860	
gac aag gct gat gac atc cag aag cgt gag aat gag gtc ctg gaa gcc	Asp Lys Ala Asp Asp Ile Gln Lys Arg Glu Asn Glu Val Leu Glu Ala	5969	
1865	1870	1875	
tgg aag tcc ctg ctg gat gct tgt gag ggt cgc agg gtg cgg ctg gta	Trp Lys Ser Leu Leu Asp Ala Cys Glu Gly Arg Arg Val Arg Leu Val	6017	
1880	1885	1890	1895
gac aca gga gac aag ttc cgc ttc agc atg gtg cgt gac ctc atg	Asp Thr Gly Asp Phe Arg Phe Phe Ser Met Val Arg Asp Leu Met	6065	
1900	1905	1910	
ctc tgg atg gaa gat gtc atc cgg cag atc gag gcc cag gag aaa cca	Leu Trp Met Glu Asp Val Ile Arg Gln Ile Glu Ala Gln Glu Lys Pro	6113	
1915	1920	1925	
cgg gat gtg tca tct gtt gaa ctg tta atg aat aat cat caa ggt atc	Arg Asp Val Ser Ser Val Glu Leu Leu Met Asn Asn His Gln Gly Ile	6161	
1930	1935	1940	
aaa gct gaa att gat gct cgt aat gac agc ttt aca gcc tgc att gag		6209	
Lys Ala Glu Ile Asp Ala Arg Asn Asp Ser Phe Thr Ala Cys Ile Glu			
1945	1950	1955	
ctt ggg aaa tcc ctg ctg gca cgg aaa cac tat gct tct gag gag atc	Leu Gly Lys Ser Leu Ala Arg Lys His Tyr Ala Ser Glu Glu Ile	6257	
1960	1965	1970	1975
aag gaa aag tta ctg cag ctg aca gag aaa aga aaa gaa atg att gac	Lys Glu Lys Leu Leu Gln Leu Thr Glu Lys Arg Lys Glu Met Ile Asp	6305	
1980	1985	1990	
aag tgg gaa gac cgg tgg gag tgg tta aga ctg att ttg gag gtc cat	Lys Trp Glu Asp Arg Trp Glu Trp Leu Arg Leu Ile Leu Glu Val His	6353	
1995	2000	2005	
cag ttc tca agg gat gcc agt gtg gca gag gct tgg ctg ctt gga cag		6401	

Phe Asp Lys Leu Lys Lys Ser Asn Ala His Tyr Asn Leu Gln Asn Ala
 210 215 220
 Phe Asn Leu Ala Glu Gln His Leu Gly Leu Thr Lys Leu Leu Asp Pro
 225 230 235 240
 Glu Asp Ile Ser Val Asp His Pro Asp Glu Lys Ser Ile Ile Thr Tyr
 245 250 255
 Val Val Thr Tyr Tyr His Tyr Phe Ser Lys Met Lys Ala Leu Ala Val
 260 265 270
 Glu Gly Lys Arg Ile Gly Lys Val Leu Asp Asn Ala Ile Glu Thr Glu
 275 280 285
 Lys Met Ile Glu Lys Tyr Glu Thr Leu Ala Ser Asp Leu Leu Glu Trp
 290 295 300
 Ile Glu Gln Thr Ile Ile Leu Asn Asn Arg Lys Phe Ala Asn Ser
 305 310 315 320
 Leu Val Gly Val Gln Gln Leu Gln Ala Phe Asn Thr Tyr Arg Thr
 325 330 335
 Val Glu Lys Pro Pro Lys Phe Thr Glu Lys Gly Asn Leu Glu Val Leu
 340 345 350
 Leu Phe Ala Ile Gln Ser Lys Met Arg Ala Asn Asn Gln Lys Val Tyr
 355 360 365
 Met Pro Arg Glu Gly Lys Leu Ile Ser Asp Ile Asn Lys Ala Trp Glu
 370 375 380
 Arg Leu Glu Lys Ala Glu His Glu Arg Glu Leu Ala Leu Arg Asn Glu
 385 390 395 400
 Leu Ile Arg Gln Glu Lys Leu Glu Gln Leu Ala Arg Arg Phe Asp Arg
 405 410 415
 Lys Ala Ala Met Arg Glu Thr Trp Leu Ser Glu Asn Gln Arg Leu Val
 420 425 430
 Ser Gln Asp Asn Phe Gly Phe Asp Leu Pro Ala Val Glu Ala Ala Thr
 435 440 445
 Lys Lys His Glu Ala Ile Glu Thr Asp Ile Ala Ala Tyr Glu Glu Arg
 450 455 460
 Val Gln Ala Val Val Ala Val Ala Arg Glu Leu Glu Ala Glu Asn Tyr
 465 470 475 480
 His Asp Ile Lys Arg Ile Thr Ala Arg Lys Asp Asn Val Ile Arg Leu
 485 490 495
 Trp Glu Tyr Leu Leu Glu Leu Leu Arg Ala Arg Arg Gln Arg Leu Glu
 500 505 510
 Met Asn Leu Gly Leu Gln Lys Ile Phe Gln Glu Met Leu Tyr Ile Met
 515 520 525
 Asp Trp Met Asp Glu Met Lys Val Leu Leu Ser Gln Asp Tyr Gly
 530 535 540
 Lys His Leu Leu Gly Val Glu Asp Leu Leu Gln Lys His Ala Leu Val
 545 550 555 560
 Glu Ala Asp Ile Ala Ile Gln Ala Glu Arg Val Arg Gly Val Asn Ala
 565 570 575
 Ser Ala Gln Lys Phe Ala Thr Asp Gly Glu Gly Tyr Lys Pro Cys Asp
 580 585 590
 Pro Gln Val Ile Arg Asp Arg Val Ala His Met Glu Phe Cys Tyr Gln
 595 600 605
 Glu Leu Cys Gln Leu Ala Ala Glu Arg Arg Ala Arg Leu Glu Glu Ser
 610 615 620
 Arg Arg Leu Trp Lys Phe Phe Trp Glu Met Ala Glu Glu Glu Gly Trp
 625 630 635 640
 Ile Arg Glu Lys Glu Lys Ile Leu Ser Ser Asp Asp Tyr Gly Lys Asp
 645 650 655
 Leu Thr Ser Val Met Arg Leu Leu Ser Lys His Arg Ala Phe Glu Asp
 660 665 670
 Glu Met Ser Gly Arg Ser Gly His Phe Glu Gln Ala Ile Lys Glu Gly
 675 680 685
 Glu Asp Met Ile Ala Glu Glu His Phe Gly Ser Glu Lys Ile Arg Glu
 690 695 700
 Arg Ile Ile Tyr Ile Arg Glu Gln Trp Ala Asn Leu Glu Gln Leu Ser
 705 710 715 720
 Ala Ile Arg Lys Lys Arg Leu Glu Glu Ala Ser Leu Leu His Gln Phe

	725	730	735												
Gln	Ala	Asp	Ala	Asp	Asp	Ile	Asp	Ala	Trp	Met	Leu	Asp	Ile	Leu	Lys
	740	745	750												
Ile	Val	Ser	Ser	Asn	Asp	Val	Gly	His	Asp	Glu	Tyr	Ser	Thr	Gln	Ser
	755	760	765												
Leu	Val	Lys	Lys	His	Lys	Asp	Val	Ala	Glu	Glu	Ile	Thr	Asn	Cys	Arg
	770	775	780												
Pro	Thr	Ile	Asp	Thr	Leu	His	Glu	Gln	Ala	Ser	Ala	Leu	Pro	Gln	Ala
	785	790	795	800											
His	Ala	Glu	Ser	Pro	Asp	Val	Lys	Gly	Arg	Leu	Ala	Gly	Ile	Glu	Glu
	805	810	815												
Arg	Cys	Lys	Glu	Met	Ala	Glu	Leu	Thr	Arg	Leu	Arg	Lys	Gln	Ala	Leu
	820	825	830												
Gln	Asp	Thr	Leu	Ala	Leu	Tyr	Lys	Met	Phe	Ser	Glu	Ala	Asp	Ala	Cys
	835	840	845												
Glu	Leu	Trp	Ile	Asp	Glu	Lys	Glu	Gln	Trp	Leu	Asn	Asn	Met	Gln	Ile
	850	855	860												
Pro	Glu	Lys	Leu	Glu	Asp	Leu	Glu	Val	Ile	Gln	His	Arg	Phe	Glu	Ser
	865	870	875	880											
Leu	Glu	Pro	Glu	Met	Asn	Asn	Gln	Ala	Ser	Arg	Val	Ala	Val	Val	Asn
	885	890	895												
Gln	Ile	Ala	Arg	Gln	Leu	Met	His	Asn	Gly	His	Pro	Ser	Glu	Lys	Glu
	900	905	910												
Ile	Arg	Ala	Gln	Gln	Asp	Lys	Leu	Asn	Thr	Arg	Trp	Ser	Gln	Phe	Arg
	915	920	925												
Glu	Leu	Val	Asp	Arg	Lys	Lys	Asp	Ala	Leu	Leu	Ser	Ala	Leu	Ser	Ile
	930	935	940												
Gln	Asn	Tyr	His	Leu	Glu	Cys	Asn	Glu	Thr	Lys	Ser	Cys	Ile	Arg	Glu
	945	950	955	960											
Lys	Thr	Lys	Val	Ile	Glu	Ser	Thr	Gln	Asp	Leu	Gly	Asn	Asp	Leu	Ala
	965	970	975												
Gly	Val	Met	Ala	Leu	Gln	Cys	Lys	Leu	Thr	Gly	Met	Glu	Arg	Asp	Leu
	980	985	990												
Val	Ala	Ile	Glu	Ala	Lys	Leu	Ser	Asp	Leu	Gln	Lys	Glu	Ala	Glu	Lys
	995	1000	1005												
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aatccatcg	tgcaactggc	ctgggcctaa	ggttgggcat	a atg gag ttg cag agg		416
				Met Glu Leu Gln Arg		
				1	5	
aca tcc agc att tca	ggg ccg ctg tcg	ccg gcc tac acc	ggg cag gtg			464
Thr Ser Ser Ile Ser	Gly Pro Leu Ser	Pro Ala Tyr Thr	Gly Gln Val			
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cct tac aac tac aac caa	ctg gaa gga	aga ttc aaa cag	ctc caa gat			512
Pro Tyr Asn Tyr Asn Gln	Leu Glu Gly	Arg Phe Lys	Gln Leu Gln Asp			
25	30	35				
gag cgt gaa gct gta	cag aag acc ttc	acc aag tgg	gtc aat tcc			560
Glu Arg Glu Ala Val	Gln Lys Lys	Thr Phe Thr	Lys Trp Val	Asn Ser		
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cac ctt gcg aga gtg	tcc tgc cga	atc aca gac	ctg tac acg	gac ctt		608
His Leu Ala Arg Val	Ser Cys Arg	Ile Thr Asp	Leu Tyr Thr	Asp Leu		
55	60	65				
cga gat gga cg	atg ctc atc aag	cta ctg gag	gtc ctc tct	gga gag		656
Arg Asp Gly Arg Met	Leu Ile Lys	Leu Glu Val	Leu Ser Gly	Glu		
70	75	80	85			
agg ctg cct aaa ccc	act aag gga	cg	atg ccc atc cac	tgt ctg gag		704
Arg Leu Pro Lys Pro	Thr Lys Gly	Arg Met Arg	Ile His Cys	Leu Glu		
90	95	100				
aat gtc gac aag gct	ctt caa ttc	ctg aaa gag	cag aga gtc	cat ctt		752
Asn Val Asp Lys Ala	Leu Gln Phe	Leu Lys Glu	Gln Arg Val	His Leu		
105	110	115				
gag aac atg ggc tcc	cat gac att	gtg gat gga	aac cac cgg	ctg aca		800
Glu Asn Met Gly Ser	His Asp Ile	Val Asp Gly	Asn His Arg	Leu Thr		
120	125	130				
acg ttg gag cta ctg	gaa gtg cgc	aga cag caa	gag gaa	gaa aga		848
Thr Leu Glu Leu Leu	Glu Val Arg	Arg Gln Gln	Glu Glu Glu	Arg		
135	140	145				
aag agg cgg cca cct	tct ccg gac	cca aac acg	aag gtt tca	gag gag		896
Lys Arg Arg Pro Pro	Ser Pro Asp	Pro Asn Thr	Lys Val Ser	Glu Glu		
150	155	160	165			
gct gag tcc cag caa	tgg gat act	tca aaa gga	gac caa gtt	tcc cag		944
Ala Glu Ser Gln Gln	Trp Asp Thr	Ser Lys Gly	Asp Gln Val	Ser Gln		
170	175	180				
aat ggt ttg ccg gct	gag cag gga	tct cca	cg	gtt agt tac cgc tct		992

Asn Gly Leu Pro Ala Glu Gln Gly Ser Pro Arg Val Ser Tyr Arg Ser
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 caa acg tac caa aac tac aaa aac ttt aat agc aga cggtt aca gcc agt 1040
 Gln Thr Tyr Gln Asn Tyr Lys Asn Phe Asn Ser Arg Arg Thr Ala Ser
 200 205 210
 gac cat tca tgg tct gga atg tgaagttcac taccatttgtt caagaaccac 1091
 Asp His Ser Trp Ser Gly Met
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 <213> Mus musculus

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 Lys Gln Leu Gln Asp Glu Arg Glu Ala Val Gln Lys Lys Thr Phe Thr
 35 40 45
 Lys Trp Val Asn Ser His Leu Ala Arg Val Ser Cys Arg Ile Thr Asp
 50 55 60
 Leu Tyr Thr Asp Leu Arg Asp Gly Arg Met Leu Ile Lys Leu Leu Glu
 65 70 75 80
 Val Leu Ser Gly Glu Arg Leu Pro Lys Pro Thr Lys Gly Arg Met Arg
 85 90 95
 Ile His Cys Leu Glu Asn Val Asp Lys Ala Leu Gln Phe Leu Lys Glu
 100 105 110
 Gln Arg Val His Leu Glu Asn Met Gly Ser His Asp Ile Val Asp Gly
 115 120 125
 Asn His Arg Leu Thr Thr Leu Glu Leu Leu Glu Val Arg Arg Gln Gln
 130 135 140

 Glu Glu Glu Glu Arg Lys Arg Arg Pro Pro Ser Pro Asp Pro Asn Thr
 145 150 155 160
 Lys Val Ser Glu Glu Ala Glu Ser Gln Gln Trp Asp Thr Ser Lys Gly
 165 170 175
 Asp Gln Val Ser Gln Asn Gly Leu Pro Ala Glu Gln Gly Ser Pro Arg
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ccagaaaagt tcaggccatc c atg agc cac cag gaa agg att gcc agc cag 351			
Met Ser His Gln Glu Arg Ile Ala Ser Gln 10	5		
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Arg Arg Thr Thr Ala Glu Val Pro Met His Arg Ser Thr Ala Asn Gln 15 20 25			
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Ser Lys Arg Ser Arg Ser Pro Phe Ala Ser Thr Arg Arg Arg Trp Asp 30 35 40			
gac agc gag agc tcg gga gcc agc ctg gct gtt gag agt gag gat tat 495			
Asp Ser Glu Ser Ser Gly Ala Ser Leu Ala Val Glu Ser Glu Asp Tyr 45 50 55			
tcc agg tgg cgg gat gct gcc gat gct gag gag gct cat gcc gag ggc 543			
Ser Arg Trp Arg Asp Ala Ala Asp Ala Glu Glu Ala His Ala Glu Gly 60 65 70			
cta gcc aga aga ggc cga ggt gag gct gcc agc agc tca gag cca agg 591			
Leu Ala Arg Arg Gly Arg Gly Glu Ala Ala Ser Ser Ser Glu Pro Arg 75 80 85 90			
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Tyr Ala Glu Asp Gln Asp Ala Arg Ser Glu Gln Ala Lys Ala Asp Lys 95 100 105			
gtg cca aga cgg cgg cga acc atg gca gac cct gac ttc tgg gca tac 687			
Val Pro Arg Arg Arg Thr Met Ala Asp Pro Asp Phe Trp Ala Tyr 110 115 120			
acc gac gat tac tac cga tac tac gag gaa gat tct gac agc gac aaa 735			
Thr Asp Asp Tyr Tyr Arg Tyr Tyr Glu Glu Asp Ser Asp Ser Asp Lys 125 130 135			
gag tgg atg gct gcc ctg cgc agg aag tac cga agc cga gag caa ccc 783			
Glu Trp Met Ala Ala Leu Arg Arg Lys Tyr Arg Ser Arg Glu Gln Pro			

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ctg gaa cgt cag caa gcc gga gct ggg agc ctc gcc agt gct ggc agc Leu Glu Arg Gln Gln Ala Gly Ala Gly Ser Leu Ala Ser Ala Gly Ser 175 180 185			879
aat ggc agt ggt tat cct gaa gaa gta caa gac cca tct ctt cag gag Asn Gly Ser Gly Tyr Pro Glu Glu Val Gln Asp Pro Ser Leu Gln Glu 190 195 200			927
gaa gaa cag gcc tct ctg gaa gaa gga gaa atc cct tgg ctt cgc tac Glu Glu Gln Ala Ser Leu Glu Glu Gly Glu Ile Pro Trp Leu Arg Tyr 205 210 215			975
aat gag aat gaa agc agc agc gag ggt gat aat gag tct acc cat gag Asn Glu Asn Glu Ser Ser Ser Glu Gly Asp Asn Glu Ser Thr His Glu 220 225 230			1023
ctc ata cag cct ggg atg ttc atg ctg gat gga aac aac aac ctg gaa Leu Ile Gln Pro Gly Met Phe Met Leu Asp Gly Asn Asn Asn Leu Glu 235 240 245 250			1071
gat gac tcc agc gtg agc gaa gac ctc gaa gtg gac tgg agc ctg ttt Asp Asp Ser Ser Val Ser Glu Asp Leu Glu Val Asp Trp Ser Leu Phe 255 260 265			1119
gat ggg ttt gcc gat ggc ttg gga gtg gcc gaa gcc atc tcc tac gtg Asp Gly Phe Ala Asp Gly Leu Gly Val Ala Glu Ala Ile Ser Tyr Val 270 275 280			1167
gat cct cag ttc ctc acc tac atg gct ctg gaa gag cgt ctg gcc cag Asp Pro Gln Phe Leu Thr Tyr Met Ala Leu Glu Glu Arg Leu Ala Gln 285 290 295			1215
gca atg gag acg gcc ctg gca cac ttg gag tct ctc gcc gtt gat gtc Ala Met Glu Thr Ala Leu Ala His Leu Glu Ser Leu Ala Val Asp Val 300 305 310			1263
gaa gtg gcc aac cca cca gca agc aag gag agc att gat gcc ctt cct Glu Val Ala Asn Pro Pro Ala Ser Lys Glu Ser Ile Asp Ala Leu Pro 315 320 325 330			1311
gag atc ctg gtc acc gaa gat cat ggt gca gtg ggc cag gaa atg tgc Glu Ile Leu Val Thr Glu Asp His Gly Ala Val Gly Gln Glu Met Cys 335 340 345			1359
tgt cct atc tgc tgc agc gaa tat gtg aag ggg gag gtg gca act gag Cys Pro Ile Cys Cys Ser Glu Tyr Val Lys Gly Glu Val Ala Thr Glu 350 355 360			1407
cta cca tgc cac cac tat ttc cac aag ccc tgc gtg tcc atc tgg ctt Leu Pro Cys His His Tyr Phe His Lys Pro Cys Val Ser Ile Trp Leu 365 370 375			1455
cag aag tct ggc acc tgc cca gtg tgc cgc tgc atg ttc cct ccc ccg Gln Lys Ser Gly Thr Cys Pro Val Cys Arg Cys Met Phe Pro Pro Pro 380 385 390			1503
ctc taa aagccaaggc tcgtcgtaac agtcagcctg gttacattcc ctgtccgaaa Leu			1559

395

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<212> PRT
<213> Mus musculus

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 35 40 45
 Ala Ser Leu Ala Val Glu Ser Glu Asp Tyr Ser Arg Trp Arg Asp Ala
 50 55 60
 Ala Asp Ala Glu Glu Ala His Ala Glu Gly Leu Ala Arg Arg Gly Arg
 65 70 75 80
 Gly Glu Ala Ala Ser Ser Ser Glu Pro Arg Tyr Ala Glu Asp Gln Asp
 85 90 95
 Ala Arg Ser Glu Gln Ala Lys Ala Asp Lys Val Pro Arg Arg Arg Arg
 100 105 110
 Thr Met Ala Asp Pro Asp Phe Trp Ala Tyr Thr Asp Asp Tyr Tyr Arg
 115 120 125
 Tyr Tyr Glu Glu Asp Ser Asp Ser Asp Lys Glu Trp Met Ala Ala Leu
 130 135 140
 Arg Arg Lys Tyr Arg Ser Arg Glu Gln Pro Gln Ser Ser Ser Gly Glu
 145 150 155 160
 Ser Trp Glu Leu Leu Pro Gly Lys Glu Glu Leu Glu Arg Gln Gln Ala
 165 170 175
 Gly Ala Gly Ser Leu Ala Ser Ala Gly Ser Asn Gly Ser Gly Tyr Pro
 180 185 190
 Glu Glu Val Gln Asp Pro Ser Leu Gln Glu Glu Glu Gln Ala Ser Leu
 195 200 205
 Glu Glu Gly Glu Ile Pro Trp Leu Arg Tyr Asn Glu Asn Glu Ser Ser
 210 215 220

Ser Glu Gly Asp Asn Glu Ser Thr His Glu Leu Ile Gln Pro Gly Met
 225 230 235 240
 Phe Met Leu Asp Gly Asn Asn Asn Leu Glu Asp Asp Ser Ser Val Ser
 245 250 255
 Glu Asp Leu Glu Val Asp Trp Ser Leu Phe Asp Gly Phe Ala Asp Gly
 260 265 270
 Leu Gly Val Ala Glu Ala Ile Ser Tyr Val Asp Pro Gln Phe Leu Thr
 275 280 285
 Tyr Met Ala Leu Glu Glu Arg Leu Ala Gln Ala Met Glu Thr Ala Leu
 290 295 300
 Ala His Leu Glu Ser Leu Ala Val Asp Val Glu Val Ala Asn Pro Pro
 305 310 315 320
 Ala Ser Lys Glu Ser Ile Asp Ala Leu Pro Glu Ile Leu Val Thr Glu
 325 330 335
 Asp His Gly Ala Val Gly Gln Glu Met Cys Cys Pro Ile Cys Cys Ser
 340 345 350
 Glu Tyr Val Lys Gly Glu Val Ala Thr Glu Leu Pro Cys His His Tyr
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 <223> n=a or c or t or g

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<210> 12
 <211> 2998
 <212> DNA
 <213> Mus musculus

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<222>
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tttaatttac ttttgttagt acacaaaatgtt attttgcatt tacacctgtt ttagctatgt 1980
gtataactcta cttttcgatc acactgactt cttttttt ttccttcacc catcctgtatg 2040
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ctagcttctg cttttagac aaaacaagat acttgtctt ctcccccattt ccctcctttt 2160
gtttaatttct cttccagccc tacatggatc ccccttgacc tcgtgtcata tatctaaatc 2220
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<210> 13
<211> 1121
<212> DNA
<213> Mus musculus

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<220>
<221> misc_feature
<222>
<223> n=a or c or t or g

<400> 13
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atgacctgat ggggnagata actgagctag tcagcgcgt aataggntat 120
agtacccag ntaatggct ncccacatgt cactgaagga gtgtcagttc tcagcattt 180
accttaatt ttaattttt cctctaaatg cgctttaga ggctacccac agttgatgac 240
aacacgtgt a gccaggcatg ccagaactgt taccagcaga actttggcc gactgttagt 300
ggcagtgttc tcagtagtgc agttcatgcc ttgtgggtt aactaggta caacgaagtc 360
actttgaact cttttgtcaa ctaataaagc caaataaaca aatcatgaaa tactgattag 420
caatgcaata tttcatggca tgggaagagc ttgcacttct ccacatcggtga caaggagcag 480
cttcttggaa gaaggcttgg agaaaaacaac tgacggggag ctccgaggag ccctgaacac 540
gtcactcaac agcactggcg ttgacacagc tgctgtggc cagcagtac tcagtgaga 600
gtgcacaaagg gtgggcagac agncagnctt acttcttcat ctccaggatg gcacttccag 660
gccccacgggtt cttagacta cagatgttgc agtattgtgc aggagcattc atgctcgcca 720
taggcaggca ctcccttggg aacatgttgc ggcagtggaa gaccaccacg ctgaagggtt 780
tcnctgcattc ttttgggggg atgggagaaa ggcatgattc acagatattc tcttcatcaa 840
ccagaacgcc tttcatttgg gttcgngca tttttcaca caccaacgac aatgagttag 900
ctacgaggat tttcttgacag ctttcccgaa gcagaatctt caagttataa tcttgcagaa 960
tttaaccaa ggaatcttc aaattggaa tttccatttcc ttccctaatt cggtgatgaa 1020
gtagaatcggtt gtcacatgtt gtccaatgtt ttgtcaacaa gccagtgata aatggtggtt 1080
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<210> 14
<211> 779
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222>
<223> n=a or c or t or g

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cccaacccctt tcatttcctt ttcaaggatgtt aagacaact taacatccaa gactaacaag 180
caagatgact caggagcatg gnctctgggt tcccctggca ccatgcatgg tgatgttagt 240
taaggctgac ttatgttca gcaaccccttgg ttgggatagc ttaagctcat ctccactt 300
ctacccaaaca gaaaagaatt tgagtccttct tgcttatgagg ctctcgctcc catctcaggc 360
gagcttcctg cccctcaccc aagcttgggaa ggttagatgtt tggagaggc aaggaagcag 420
gactggaaag atagacttattt ggatccacca ctcataaaagt cacaaggatcc cctcacaccc 480
gcttagacttta gactcttaat cattacgttgc tcaccaacag aggtgactcc tcaaccacaa 540
gagcctgttag tgacttcaaa gagagaagag gacaagncaag acctggactg catgacccctg 600
cacctgtat gaagtccacag caataggta tgctcaaaaa gcccccaataa aatgcaagac 660
agncaaacag aagccctgtc tggcccttattt ggtgggtt aatgtcgatg tggctggttc 720
tccttccttgc acttcaccctt gactatggaa attgtccattt aatgtcccttgc ggcgaattt 779

<210> 15
<211> 981
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222>
<223> n=(a or c or t or g)

<400> 15
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agccatcgac agagaagttt cttcttnnt tttgatagga gctaacacag cgaccacan 180
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 cccctccccca ggcntcaggc agctctgagg aagaggaggc agaaagatgg tgagagccag 300
 cagggatgga ggacacccaag gaagcagtgt cttccgacac aacaggactg gcatttagga 360
 agtcacacagag gctgtggctg cccagggcct gcacgggtcca agctggctga gattccagtg 420
 ctgagagaga caattcaaca cggncctcca cccctagnca agaagttatc tccaaactgt 480
 atccacttgc aaaggaaaaa attaggggn tagagagatg gctcagtggn taagagcact 540
 gacttanaaa atagaaatng canatnngnt nngangtng cnnaatngct gagaatngc 600
 caattggctg gaaaacttgc aacattgcct ggagaactgc caaattgcct ggagagctgc 660
 caaattggcc tggagagctg cctacatggc ctggagagct gcccacatgg cctggagaaac 720
 tggctacatg tcctggagag ctgccaacat gtcctggaga tctgcctaca tggcctggag 780
 aactgcctac atgacctgga gagctggcca catggcctgg agagctggct acatgaccctg 840
 gagagctgnc tacatggctt ggagagctgg ctacatggcc tggagagctg gctacatggc 900
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<210> 16
 <211> 685
 <212> DNA
 <213> Mus musculus

<220>
 <221> misc_feature
 <222>
 <223> n=(a or c or t or g)

<400> 16
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 tccactatac gtctgttta tacaataata ttgnntaaat ttgncttat catgaaataac 180
 ctcactttcc ttatctgtat tgattgaaag ttttgggtgaa tgtaatagtt tgggcttggaa 240
 tctgaagtct tttagagttt attggacatg tgcctngatt cattggntt aaaatcncc 300
 acnacttggg ggtgtaaagg ttaccacnc nattantgga gtttcttctg agttccagag 360
 anaangantg agccaccnngg aatttccctt aaacacactt tgatcatttc ctgcctaacc 420
 ctgcagagga aatattaata ccctgtatg ccaaaggaaa caaataagaa ggaagactgn 480
 tctctcatgt ctggaggaag tttgggtgaa gagtttctgt tttgttcaca taggagagat 540
 ctaatcacagc cactatccat aattaaaaat ctctgtgaga gaggcatgac gaggttctcc 600
 cagtctgtca agggatgtga atatgtttn ccctgtcatc ctgtcatgaa gcctctctt 660
 ctctctctt ctcgtgccc aattc 685

<210> 17
 <211> 471
 <212> DNA
 <213> Mus musculus

<220>
 <221> misc_feature
 <222>
 <223> n=(a or c or t or g)

<400> 17
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 angtnggttn atanacnng gggaggtgtc tgaaaanagt gncacgtac ttttctcaga 180
 cccagngggaa gncatcagag tccccctgggg ttggaattaa agatgtttgt gagtcnctgc 240
 gtgtatcctg gacttcaaac ccgggtcttc tcaagagca gccagtgtc ttaaccactg 300
 agggatctct ccagcctcat cgctgattt ggaaggactt ttactgattt ggagtanctg 360
 tagccaaatnc agtctatgac gatttcctt tagcagttct tttttttt cttaatgata 420
 gccataactga ttgtcgat ttacagcagc actagcaagc tggactcga g 471

<210> 18
 <211> 467
 <212> DNA
 <213> Mus musculus

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<220>
<221> misc_feature
<222>
<223> n=(a or c or t or g)

<400> 18
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tttttnnnnn aanaaanttt taaagttttt ttttttttat naaaannttt ccaagggggg 120
gangggtag aaganagcca naggctggnc cccctgcca gaaaaaacca gaggggggtt 180
gatgtccccca agtccagttg tcaccctgaa gaagttcccc acgattccc tggtgccccc 240
ccgggagtagc gtccagatgt tcacccttgc catttggag ctgtggaaag ggngtgggnt 300
ccctcccagn ggggcccccaa acccttcctcc tgaacagnic ctgattctg accatcttc 360
caattccacg gattcaaaga gcatgaccct aggttaagcaa gccaggtaa gagcattgct 420
tgtctgnagg aaaaggaagg gtccctcctg gcctcgtgcc gaattcc 467

<210> 19
<211> 13
<212> PRT
<213> Mus musculus

<400> 19
Glu Leu Gln Arg Thr Ser Ser Val Ser Gly Pro Leu Ser
1 5 10

<210> 20
<211> 14
<212> PRT
<213> Mus musculus

<400> 20
Phe Asn Ser Arg Arg Thr Ala Ser Asp His Ser Trp Ser Gly
1 5 10

<210> 21
<211> 13
<212> PRT
<213> Mus musculus

<400> 21
Leu Arg Arg Lys Tyr Arg Ser Arg Glu Gln Pro Gln Ser
1 5 10

<210> 22
<211> 18
<212> PRT
<213> Mus musculus

<400> 22
Ser Ala Gln Ser Leu Val Val Thr Leu Gly Arg Val Glu Gly Gly Ile
1 5 10 15

Arg Val

<210> 23
<211> 19
<212> PRT
<213> Mus musculus

<400> 23

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Cys Ser Ala Gln Ser Leu Val Val Thr Leu Gly Arg Val Glu Gly Gly
 1 5 10 15

Ile Arg Val

<210> 24

<211> 17

<212> PRT

<213> Mus musculus

<400> 24

Lys Ile Glu Gly Ser Ser Lys Cys Ala Pro Leu Arg Pro Ala Ser Arg
 1 5 10 15

Leu

<210> 25

<211> 17

<212> PRT

<213> Mus musculus

<400> 25

Cys Ala Pro Leu Arg Pro Ala Ser Arg Leu Pro Ala Ser Gln Thr Leu
 1 5 10 15

Gly

<210> 26

<211> 16

<212> PRT

<213> Mus musculus

<400> 26

Pro Pro Arg Glu Tyr Arg Ala Ser Gly Ser Arg Arg Gly Met Ala Tyr
 1 5 10 15

<210> 27

<211> 17

<212> PRT

<213> Mus musculus

<400> 27

Pro Pro Arg Glu Tyr Arg Ala Ser Gly Ser Arg Arg Gly Met Ala Tyr
 1 5 10 15

Cys

<210> 28

<211> 16

<212> PRT

<213> Mus musculus

<400> 28

Cys Lys Val Pro Arg Arg Arg Arg Thr Met Ala Asp Pro Asp Phe Trp
 1 5 10 15